

Translation

PATENT COOPERATION TREATY

PCT/JP2003/003751



PCT

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

(PCT Article 36 and Rule 70)

Applicant's or agent's file reference F1030061WO00	FOR FURTHER ACTION See Notification of Transmittal of International Preliminary Examination Report (Form PCT/IPEA/416)	
International application No. PCT/JP2003/003751	International filing date (day/month/year) 26 March 2003 (26.03.2003)	Priority date (day/month/year) 28 March 2002 (28.03.2002)
International Patent Classification (IPC) or national classification and IPC G03B 21/00, G02B 27/18, H04N 9/31, 5/74, G02F 1/13, G09G 3/36, 3/34		
Applicant SANYO ELECTRIC CO., LTD.		

1. This international preliminary examination report has been prepared by this International Preliminary Examining Authority and is transmitted to the applicant according to Article 36.

2. This REPORT consists of a total of 7 sheets, including this cover sheet.

☒ This report is also accompanied by ANNEXES, i.e., sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications made before this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions under the PCT).

These annexes consist of a total of 6 sheets.

3. This report contains indications relating to the following items:

- I ☒ Basis of the report
- II ☐ Priority
- III ☒ Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- IV ☐ Lack of unity of invention
- V ☒ Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- VI ☐ Certain documents cited
- VII ☐ Certain defects in the international application
- VIII ☐ Certain observations on the international application

Date of submission of the demand 18 September 2003 (18.09.2003)	Date of completion of this report 21 April 2004 (21.04.2004)
Name and mailing address of the IPEA/JP	Authorized officer
Facsimile No.	Telephone No.

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International application No.

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I. Basis of the report

1. With regard to the elements of the international application:*

- ☐ the international application as originally filed
- ☒ the description:
 pages 1-5, 7-42, as originally filed
 pages _____, filed with the demand
 pages 6, filed with the letter of 05 February 2004 (05.02.2004)
- ☒ the claims:
 pages 1-9, 11-44, as originally filed
 pages _____, as amended (together with any statement under Article 19
 pages _____, filed with the demand
 pages 10, filed with the letter of 05 February 2004 (05.02.2004)
- ☒ the drawings:
 pages 1-66, as originally filed
 pages _____, filed with the demand
 pages _____, filed with the letter of _____
- ☐ the sequence listing part of the description:
 pages _____, as originally filed
 pages _____, filed with the demand
 pages _____, filed with the letter of _____

2. With regard to the language, all the elements marked above were available or furnished to this Authority in the language in which the international application was filed, unless otherwise indicated under this item.

These elements were available or furnished to this Authority in the following language _____ which is:

- ☐ the language of a translation furnished for the purposes of international search (under Rule 23.1(b)).
- ☐ the language of publication of the international application (under Rule 48.3(b)).
- ☐ the language of the translation furnished for the purposes of international preliminary examination (under Rule 55.2 and/or 55.3).

3. With regard to any nucleotide and/or amino acid sequence disclosed in the international application, the international preliminary examination was carried out on the basis of the sequence listing:

- ☐ contained in the international application in written form.
- ☐ filed together with the international application in computer readable form.
- ☐ furnished subsequently to this Authority in written form.
- ☐ furnished subsequently to this Authority in computer readable form.
- ☐ The statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.
- ☐ The statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished.

4. ☐ The amendments have resulted in the cancellation of:

- ☐ the description, pages _____
- ☐ the claims, Nos. _____
- ☐ the drawings, sheets/fig _____

5. ☒ This report has been established as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).**

* Replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report since they do not contain amendments (Rule 70.16 and 70.17).

** Any replacement sheet containing such amendments must be referred to under item 1 and annexed to this report.

I. Basis of the report

1. This report has been drawn on the basis of *(Replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to the report since they do not contain amendments.)*

The amendment of claim 1 on page 43 and the amendment on page 4, which add a portion stating that "when the aforementioned cyclic deflection is caused to be generated, wasted light is reduced and ... by using at least one of the effects of condensing, reflecting two times or more, and refracting," go beyond the scope of the international application at the time of filing.

For example, the effect of "condensing" can be achieved by a simple lens, not just a lens wheel, and the inclusion of that sort of feature was not disclosed in the international application at the time of filing. Further, the effect of "reflecting two times or more" can be achieved by two simple mirrors, not just a scrolling disk, and the inclusion of that sort of feature was not disclosed in the international application at the time of filing. Moreover, the effect of "refraction" can be achieved by a simple prism, not just a scrolling prism, and the inclusion of that sort of feature was not disclosed in the international application at the time of filing.

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III. Non-establishment of opinion with regard to novelty, inventive step and industrial applicability

1. The questions whether the claimed invention appears to be novel, to involve an inventive step (to be non obvious), or to be industrially applicable have not been examined in respect of:

☐ the entire international application.

☒ claims Nos. 44

because:

☐ the said international application, or the said claims Nos. _____
relate to the following subject matter which does not require an international preliminary examination (*specify*):

☐ the description, claims or drawings (*indicate particular elements below*) or said claims Nos. _____
are so unclear that no meaningful opinion could be formed (*specify*):

☐ the claims, or said claims Nos. _____ are so inadequately supported
by the description that no meaningful opinion could be formed.

☒ no international search report has been established for said claims Nos. 44

2. A meaningful international preliminary examination cannot be carried out due to the failure of the nucleotide and/or amino acid sequence listing to comply with the standard provided for in Annex C of the Administrative Instructions:

☐ the written form has not been furnished or does not comply with the standard.

☐ the computer readable form has not been furnished or does not comply with the standard.

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V. Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Claims	1-43	YES
	Claims		NO
Inventive step (IS)	Claims	2-9, 14-36	YES
	Claims	1, 10-13, 37-43	NO
Industrial applicability (IA)	Claims	1-43	YES
	Claims		NO

2. Citations and explanations

Documents cited in the international search report:

Document 1: JP 2000-194067 A (Matsushita Electric Industrial Co., Ltd.), 14 July 2000

Document 2: JP 2001-296841 A (Matsushita Electric Industrial Co., Ltd.), 26 October 2001

Newly cited documents:

Document 3: JP 2001-305484 A (Seiko Epson Corp.), 31 October 2001

Document 4: WO 00/60397 A2 (Koninklijke Philips Electronics N.V.), 12 October 2000

Document 5: JP 2001-174913 A (Minolta Co., Ltd.), 29 June 2001

Claim 1

A projector equipped with a light source, "a condensing lens (16)," "a color-separating optical system (111)," and "a projection lens (134)" is known in the art, and is also disclosed in document 1. Further, document 1 (paragraphs [0138] to [0156], fig. 24, 30 to 37) discloses a feature wherein moving picture blurring is improved by providing "a rotating shutter (141b)" in between a light source and "a condensing lens (16)." Therefore, document 1 is recognized as disclosing a projector equipped with a

light source, "a condensing lens (16)," "a color-separating optical system (111)," and "a projection lens (134)," wherein moving picture blurring is improved by providing "a rotating shutter (141b)" in between the light source and the "condensing lens (16)."

Document 2 (paragraphs [0192] to [0196], fig. 20) is recognized as disclosing a projector wherein moving picture blurring is improved without fundamental loss of brightness by using "a rotating prismatic mirror (361)" (corresponding to "a light-deflecting means for causing generation of cyclic deflection of light" in the present application) in place of a shutter.

A person skilled in the art could easily conceive of using the "rotating prismatic mirror" disclosed in document 2 in place of the "rotating shutter (141b)" disclosed in document 1.

Therefore, the invention described in claim 1 does not involve an inventive step in the light of documents 1 and 2.

Claims 10 and 11

The use of a tapered rod prism is disclosed in document 3 (fig. 3), and a person skilled in the art could easily conceive of the application thereof.

Further, a light source equipped with a reflecting mirror is known in the art.

Therefore, the invention described in claims 10 and 11 does not involve an inventive step in the light of documents 1 to 3.

Claim 12

The use of a lens array wheel as a light-deflecting means is disclosed in document 4, and a person skilled in the art could easily conceive of the application thereof.

Therefore, the invention described in claim 12 does not involve an inventive step in the light of documents 1, 2, and 4.

Claim 13

Using a prism that rotates freely as a light-deflecting means is disclosed in document 5 (fig. 4), and a person skilled in the art could easily conceive of the application thereof.

Therefore, the invention described in claim 13 does not involve an inventive step in the light of documents 1, 2, and 5.

Claims 37 to 42

Claims 37 to 42 describe features fittingly determined at the discretion of a person skilled in the art.

Therefore, the invention described in claims 37 to 42 does not involve an inventive step in the light of documents 1 and 2.

Claim 43

The provision of a shutter in the optical path of each color of light is disclosed in document 1 (fig. 35). A person skilled in the art could easily conceive of using a light-deflecting means.

Therefore, the invention described in claim 43 does not involve an inventive step in the light of documents 1 and 2.

Claims 2 to 9 and 14 to 36

The invention described in claims 2 to 9 and 14 to 36 is not disclosed in any of the documents cited in the international search report, nor would it be obvious to a person skilled in the art.